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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/594,682

09/28/2006

Shinsuke Aoshima

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EXAMINER

NGUYEN, TU T

ART UNIT

PAPER NUMBER

2886

MAIL DATE

DELIVERY MODE

07/12/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/594,682	Applicant(s) AOSHIMA ET AL.	
	Examiner Tu T. Nguyen	Art Unit 2886	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-7 and 9-14 is/are rejected.
- 7) ☒ Claim(s) 8 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 September 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>9/28/06</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Specification

The "CROSS-REFERENCE TO RELATED APPLICATIONS" section should be added at the beginning of the specification.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-2,4-7,9-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kenichiro et al (JP 6331557).

With respect to claim 1, Kenichiro discloses an apparatus for detecting an internal defect in an optical fiber (PURPOSE section), the apparatus comprising: a detection light illumination device 2 (fig 1) for illuminating detection light to the optical fiber 1 (fig 1) from a direction that crosses the axis of the optical fiber (along the fiber); an imaging device 3 (fig 1) that takes an image of the optical fiber illuminated by the detection light from a direction that crosses the optical axis of the detection light, and outputs signals in the radial direction perpendicular to the axis of the optical fiber (90 degrees with the fiber); detects the internal defect based on the brightness distribution (CONSTITUTION section).

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Kenichiro does not explicitly disclose determining the defect by obtaining the light intensity distribution signals continuously in the axial direction of the optical fiber. Since Kenichiro discloses detecting the brightness distribution of the reflected light, it would have been obvious that the claimed intensity distribution would be a same as the brightness distribution taught by Kenichiro.

With respect to claim 2, Kenichiro discloses using a pair of CCD 3A, 3B (fig 5). Kenichiro does not disclose using more than two pair as claimed. However, it would have been obvious to modify Kenichiro with more than two pair of CCD at the locations as claimed to measure the scattered light in different angles at a same time.

With respect to claims 4-6, Kenichiro discloses the claimed invention except for setting the start position or the threshold or judgment values or the predetermined time as claimed. However, it would have been obvious to modify Kenichiro with the claimed limitations to measure different type of fibers or to measure different desired sections of a fiber.

With respect to claim 7, refer to discussion in claim 6 above for the threshold value. Further, it would have been obvious to modify Kenichiro by converting the detected signals into binary data as claimed to use a computer to analyze the condition of the fiber.

With respect to claim 9, Kenichiro discloses the claimed invention except for a marking device. However, the claimed marking device would have been known. It would have been obvious to modify Kenichiro with a known marking device to mark any bad sections in the fiber.

With respect to claims 10-11, Kenichiro discloses the claimed invention except for the optical fiber having the diameter greater than 250 μm or a plastic fiber. It would have been obvious to modify Kenichiro to measure different size or different type of fibers for different measuring purposes.

With respect to claim 12, Kenichiro discloses using the measuring system in a manufacture apparatus (title).

With respect to claim 13, refer to discussion in claim 1 above.

With respect to claim 14, refer to discussion in claim 2 above for using more than two pairs of CCD.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kenichiro et al (JP 6331557) in view of Christian et al (JP 11271175).

With respect to claim 3, Kenichiro discloses the claimed invention except for a line sensor. Christian discloses a system for detecting defect in an optical fiber. The

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phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

A handwritten signature in black ink, appearing to read 'Tu T. Nguyen', with a long horizontal flourish extending to the right.

Tu T. Nguyen
Primary Examiner
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system comprises a linear photosensor array 9 (fig 2) (abstract). It would have been obvious to modify Kenichiro with the sensor array taught by Christian to measure a plurality of scattered light at a same time.

Allowable Subject Matter

Claim 8 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

With respect to claim 8, the prior arts of record, taken alone or in combination, fail to disclose or render obvious a defect detection section judges the internal defect as a microscopic bubble when the size of the combined area is a first standard size or more and a second standard size or less, and judges the internal defect as a bubble in a drawing process when the size of the combined area is the second standard size, which structurally arranged and functional operated as claimed in claim 8, in combination with all the limitations of the base claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tu T. Nguyen whose telephone number is (571) 272-2424. The examiner can normally be reached on T-F 7:30-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tarifur Chowdhury can be reached on (571) 272-2800 Ext. 86. The fax